
The Impact of Providing Incentives for Attendance at AIDS Prevention Sessions

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This research was supported by grants R18DA05746, R18DA05754, and U01DA07286 from the National Institute on Drug Abuse.

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Synopsis

The research literature on AIDS prevention efforts contains many reports on the impact of intervention

sessions. Little information is available, however, on the success of various strategies to recruit clients to attend these sessions.

An assessment of the comparative impact of money and other types of incentives on group attendance in two AIDS risk reduction projects, in the Harlem area of New York City and in Cleveland, OH, was undertaken. In both projects, injecting drug users and the sex partners of injecting drug users were recruited to participate in group sessions that focused on the reduction of AIDS risk behaviors. Data on group attendance were analyzed for 838 people in the New York project and 1,168 in the Ohio project.

After the projects were underway, attendance incentives at both were changed from money to food coupons or gift certificates. Results indicated that a nonmonetary incentive was associated with a significant decline in group attendance. Concerns regarding paying monetary incentives to injecting drug users are discussed.

INJECTING DRUG USERS (IDUs) and their sex partners account for approximately one-third of all reported AIDS cases (1), and they currently constitute one of the fastest growing risk groups. Extensive efforts are underway to reduce HIV transmission among these groups. National projects have been funded to recruit and engage IDUs and their sexual partners in a variety of AIDS intervention programs. There have been many reports on the impact of interventions on behavior change (2-5), and further research to identify successful interventions continues.

Little has been reported specifically on the success of various strategies to recruit clients to attend AIDS risk reduction meetings, although some anecdotal reports have indicated difficulties in achieving high attendance rates at prevention sessions. There is almost no published literature on the types of reinforcement or incentive that could be used to increase attendance at these interventions.

Positive reinforcement for specific behaviors has been used in other health-related areas, including drug treatment settings (6,7), and incentives or "enablers" have been used to enhance compliance with tuberculosis treatment regimens (8-11).

An examination of the impact of various incentives on involvement in HIV prevention intervention programs is needed, especially among hard-to-reach populations such as IDUs. As successful programs are identified, knowledge of variables related to increasing attendance and completion of prevention programs will be critical.

In this paper we examine the comparative impact of money and other types of incentives (food coupons and gift certificates) on group attendance in two AIDS risk reduction projects, conducted in the Harlem area of New York City and in Cleveland, OH. Findings from two different geographic areas can provide information as to the generalizability of the impact of incentives on attendance. In addition, a discussion of some of the ethical issues and concerns posed by providing monetary incentives to IDUs is provided.

Methods and Subjects

Both the Harlem AIDS Project (HAP) and the Cleveland project were among the AIDS outreach research and demonstration projects funded by the

National Institute on Drug Abuse (NIDA) in 63 locations throughout the United States beginning in 1987. HAP operated in the community from 1989 through 1991, and the Cleveland project operated from 1989 until 1992. IDUs and the sex partners of IDUs (not necessarily partners of the IDUs in the groups) were recruited to participate in both AIDS risk reduction intervention projects. Baseline and 6-month followup interviews were conducted.

Participants in both projects were administered the AIDS Initial Assessment Interview (AIA), which collected data on many topics, including demographics, drug use, needle use behaviors, and sexual behaviors. Test-retest reliabilities for risky sexual behaviors and use of injected drugs ranged from .66 to .86, according to a 1991 personal communication from NOVA Research of Bethesda, MD. Cash incentives for attendance were used initially in both projects. Then, because of changes in NIDA policy, different incentives were used in both projects. This provided the opportunity for examining the impact of incentives on attendance.

The Harlem AIDS project. For the Harlem project, IDUs and the sexual partners of IDUs were recruited from the streets and from the obstetrical-gynecological clinics of Harlem Hospital. Clients were brought to one of three field sites in the Harlem community to be interviewed and then were assigned to attend a standard AIDS education group session (usually within 1–2 days of the interview). This session included discussion of modes of transmission and methods of prevention. The format was composed of didactic presentation, discussion, and an AIDS film. After this session, they were randomly assigned either to the standard intervention condition (after which they attended no additional sessions), or to an enhanced intervention condition, (after which they were asked to attend two additional sessions).

The enhanced intervention program was designed to teach specific behavioral skills needed to practice risk reduction, including needle cleaning, condom use, and the negotiation skills necessary to practice these risk reduction behaviors. Deren and coworkers provide more detail on the content of the group session (3).

At the outset, clients were given a \$15 money order for an initial interview and a \$10 money order for attendance at each group session. Providing money to clients for the interview was perceived as payment for their time spent in participation in the research aspects of the study and was continued throughout the project. Money orders were used instead of cash as a security precaution, so as not to

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keep cash at the field site. When money order payment for attendance at group sessions was no longer permitted, clients were given a \$10 food coupon, redeemable at local supermarkets.

Client recruitment began in two research sites in Harlem in May 1989. A policy change regarding incentives occurred in September 1989. Followup interviewing began in December 1989, with recruitment continuing through December 1990. A total of 1,770 clients were recruited at three research sites. For the purposes of this paper, the recruitment period of May 1, 1989, through December 1, 1989, was selected. Since followup interviewing began in December, focusing on this time period eliminates any changes that may have come from adding a followup component, such as longer delays between scheduled groups, as well as any changes due to inclement winter weather.

The Cleveland project. The Cleveland project consisted of outreach into the drug-using neighborhoods by project workers. All clients were brought to sites where they were interviewed and then given a standard intervention session assignment. The client was given \$10 for agreeing to be interviewed, although the payment was made at the end of the standard intervention. Thus, unlike the New York project, all clients who were interviewed were assigned to a standard intervention session conducted on the same day. The standard intervention consisted of viewing of an AIDS education film, a brief review of fundamental knowledge about AIDS, the risks of contracting AIDS through needle use and risks involving sexual behavior. Clients were taught how to bleach needles and properly use condoms.

Upon completion of the standard intervention session, clients were randomly assigned either to the standard intervention group (after which they attended no additional sessions) or to an enhanced intervention group. The enhanced intervention condi-

Table 1. Sociodemographic characteristics, by percentages, of clients recruited in two time periods with different incentives to New York AIDS prevention project

Characteristic	Time 1 (5/1-8/31/89) Money orders	Time 2 (9/1-12/1/89) Food coupons	Significance ¹
N.....	498	340	...
Sex:			
Male.....	58	55	NS
Female.....	42	45	...
Age (mean years) ..	37.7	36.4	$P < .05$
Ethnicity:			
African American..	93	83	$P < .001$
Hispanic.....	5	13	...
Other.....	2	4	...
Target population:			
IDUs.....	80	80	NS
Sex partners of IDUs.....	20	20	NS
Employed.....	10	7	NS
High school graduate.....	53	55	NS
Residence:			
Own home.....	31	25	$P < .05$
Someone else's home.....	44	54	...
Shelter, street....	17	12	...
Other.....	8	9	...
Children living with them.....	19	19	NS

¹Chi-square tests were used for all significance tests involving categorical data; *t* tests were used for comparisons of means.

NOTE: IDU = Injecting drug user.

tion consisted of four 1-hour sessions (usually offered at 1-week intervals) and focused on the threat of AIDS to minority populations and intravenous drug users and their sexual partners, further explanation of needle risks with additional education on the bleaching of needles, sexual risks including strategies for women to encourage sexual partners to use condoms, and a general final review session where many of the chief themes were reviewed. Clients were initially paid \$10 in cash at the completion of each of the sessions. When cash payment was no longer permitted, subjects were given a \$10 gift certificate that could be cashed at a local supermarket chain. Cash incentives were in use from April 25, 1989, to September 19, 1990; food gift certificates were given from September 20, 1990, to November 30, 1990.

In both projects, paying money (or money orders) for participation in the service intervention was halted by NIDA during the project period. This change occurred, at least in part, because of a concern about the acceptability, to local and other governmental agencies, of paying active drug users to participate in risk reduction efforts. It was perceived that many communities would be likely to oppose such a policy,

and thus the demonstration projects, regardless of outcome, may not be replicable. This change in incentive from a \$10 money order to a \$10 food coupon (for the New York-based project) and from \$10 cash to a \$10 supermarket gift certificate (for the Ohio project) provided a naturally occurring quasi-experimental design for assessing their comparative effect on group attendance. The fact that there were no systematic changes in methods of recruitment during the two periods and no changes in community-wide competing prevention efforts (to our knowledge), increases the utility of making comparisons between the two periods.

Results

Harlem AIDS project. A total of 838 clients were recruited from May 1 through December 1, 1989, 498 (59 percent) of whom participated when the incentive was \$10 for each group attended. The remaining 340 (41 percent) participated after the incentive had been changed to a \$10 food coupon. The demographic characteristics of both groups are presented in table 1. A majority of the sample were males (56 percent) and injecting drug users (80 percent).

There were significant differences between clients recruited during the two time periods. In Time 1, the mean age was 37.7 years, ethnicity was 93 percent African American, and 44 percent of clients reported living in someone else's home. In Time 2, mean age was 36.4 years, 83 percent were African American, and 54 percent lived in someone else's home. Some of these differences were due to the fact that at the first site opened, more clients were recruited when money orders were given, more clients were recruited from a nearby homeless shelter, and the site was in a more predominantly African American area. There were no significant differences between the two groups in sex, target population, employment, education, or whether clients had children living with them.

Selected risk-related behaviors of clients recruited in the two periods are summarized in table 2. In both periods, clients reported relatively high levels of risk behaviors in terms of the mean monthly frequency of injected and noninjected drug use and comparable levels of condom use during the prior 6 months. (Overall, those recruited in Time 1 reported using condoms 28 percent of the time, and those recruited in Time 2 reported condom use 31 percent of the time). Those recruited in Time 1 reported significantly higher mean monthly rates of using non-injected cocaine, but no significant differences were found in the other risk behaviors.

Overall, 76 percent of the 838 Harlem project

clients interviewed from May 1 to December 1 attended at least one group session. The impact of changing incentives from money orders to food coupons for group attendance is shown in table 3. There was a significant difference in attendance with the changed incentive. During the period when the incentive was the money order, 83 percent of all clients who were interviewed returned for at least one group session; when food coupons were used, 66 percent of clients returned for at least one session ($P < .001$).

Of the 635 clients who attended group sessions, 288 (45 percent) were randomly assigned to the standard intervention and 347 (55 percent) assigned to the enhanced intervention condition. Comparisons of client characteristics for those assigned to the enhanced and standard conditions indicates similarity of client characteristics and risk behaviors. Table 3 provides information on the relationship between the incentive used and attendance at the enhanced sessions. When money orders were used, 74 percent of those assigned to enhanced groups completed both sessions; when food coupons were used, 58 percent attended both enhanced sessions ($P < .01$). Analyses by age, ethnicity, and residential status indicated that these variables had no significant impact on the results, that is, attendance declined with food coupons across all categories.

Data were examined to see if there were any interactions between client characteristics and incentive on group attendance. No significant differences were found for any client characteristics except for ethnicity. When money orders were used, 83 percent of African Americans returned for at least one group, compared with 78 percent of Hispanics (not significant). When food coupons were used, however, 69 percent of African Americans returned for at least one group, compared to 42 percent of Hispanics ($P < .001$). Thus, although there was a reduction in attendance for both groups of clients when the incentive changed from money orders to food coupons, the greatest reduction, by almost half, occurred in the Hispanic sample.

Cleveland project. A total of 1,168 clients were recruited from April 25, 1989, through November 30, 1990. Of the total, 957 were recruited when the incentive was cash, and 211 participated after the incentive was changed to a supermarket gift certificate. Demographic characteristics of the groups are presented in table 4. As in the New York sample, a majority of the Cleveland sample were male (73 percent) and injecting drug users (69 percent).

There were significant differences in the demographic characteristics of clients recruited in Cleve-

Table 2. AIDS-related risk behaviors, by percentages, of clients recruited in two time periods with different incentives to New York AIDS prevention project

Behavior	Time 1 money orders	Time 2 food coupons	Significance ¹
Injected drug use (IDUs only): ²			
Heroin	39	43	NS
Cocaine	43	48	NS
Speedball	38	43	NS
Noninjected drug use: ²			
Alcohol	43	42	NS
Crack	50	53	NS
Cocaine	24	18	$P < .05$
Heroin	16	19	NS
Condom use (percent of time used):			
Single sex partner	17	17	NS
Multiple sex partners	35	36	NS

¹ Chi-square tests were used for all significance tests involving categorical data; [†] tests were used for comparisons of means.

² Mean monthly frequency.

Table 3. Attendance at standard and enhanced group sessions by incentive, New York AIDS prevention project

Attendance	Money orders		Food coupons		Significance ¹
	Number	Percent	Number	Percent	
Interviewed	498	...	340
Returned for session 1	411	83	224	66	$P < .001$
Assigned to enhanced	232	...	115
Number of sessions attended by those assigned to enhanced:					$P < .01$
0 sessions	37	16	26	23	...
1 session	23	10	22	19	...
2 sessions	72	74	67	58	...

¹ Chi-square tests were used for all significance tests.

land during the two periods. Generally, those recruited after the incentive changed from cash to a gift certificate were significantly more likely to be female, younger, sex partners, less likely to be high school graduates, more likely to be living in someone else's home and to have their children living with them. There were no significant differences in ethnicity of the two samples (at least 85 percent African American) or in the percent employed. Selected risk-related behaviors summarized in table 5 indicate that there were no significant differences in the two groups in terms of baseline level of drug use or condom use.

Overall, 48 percent of the 688 clients assigned to the enhanced group attended at least one session. The

Table 4. Sociodemographic characteristics, by percentages, of clients recruited in two time periods with different incentives, Cleveland AIDS prevention project

Characteristic	Time 1 (4/25/89– 9/19/90) cash	Time 2 (9/20–11/30/90) gift certificate	Significance ¹
Number.....	957	211	...
Sex:			
Male.....	75	65	$P < .05$
Female.....	25	35	...
Age (mean years) ..	36.2	34.6	$P < .05$
Ethnicity:			
African American..	8885	NS	
Hispanic.....	1	1	...
White.....	11	14	...
Target population:			
IDUs.....	70	62	$P < .05$
Sex partners of IDUs.....	30	38	...
Employed.....	19	18	NS
High school graduate.....	59	51	$P < .05$
Residence:			
Own home.....	47	46	$P < .001$
Someone else's home.....	33	48	...
Shelter, street....	6	3	...
Other.....	14	3	...
Children living with them.....	21	33	$P < .001$

¹Chi-square tests were used for all significance tests involving categorical data; *t* tests were used for comparisons of means.

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impact of changing from money to gift certificates is shown in table 6. Whereas 50 percent of the clients attended at least one session when money was provided, this dropped to 36 percent when gift certificates were used. Similarly, whereas 34 percent of all clients completed the intervention, that is, attended all 4 sessions, when money was used, only 24 percent did so when the incentive was a gift certificate ($P < .05$).

Discussion

In HAP, more than three-quarters of all clients attended at least one group session, regardless of

residential status, having children at home, or other characteristics that could interfere with their attendance. Since many of these clients had difficult living circumstances, and almost all were active users of mind-altering substances, the level of attendance indicates motivation and interest in learning about risk reduction. A similar pattern was found in the Cleveland project, although there were some specific differences as to how and when clients were assigned to the two types of conditions. The kind of incentive used had a significant impact on the level of attendance at groups and the percent of clients who completed the group intervention sessions.

These results have implications for agencies and programs involved in developing and identifying intervention programs that are successful in reducing AIDS-related risk behaviors among injecting drug users and their sex partners. When successful models have been identified, efforts to maximize attendance at these programs are required. The results presented in this paper indicate that the use of financial incentives, such as money orders, compared with nonfinancial incentives, such as food coupons or gift certificates, significantly increases attendance at group sessions.

In the Harlem project, Hispanics, who were primarily Puerto Ricans, were significantly less likely to return for group sessions, particularly when food coupons were in use (12). Given the disproportionately high number of AIDS cases among Hispanics in New York, this finding is of particular concern. Few additional significant differences were found related to demographic characteristics or risk behaviors between attenders and nonattenders, indicating that incentives such as cash or money orders are significantly more effective for all groups.

Decisions regarding the use and types of incentives to encourage active drug users to participate in HIV prevention efforts are not simply influenced by empirical findings. Several concerns have been raised regarding incentives for injecting drug users. Some of them are

1. Fear that addicts will use the money to purchase drugs and that this is an inappropriate use of public monies. The harm reduction public health model posited by some health care practitioners, which places emphasis on minimizing the harm caused by psychoactive drug use to the user and to society (13,14), has met with considerable success and may be a relevant model in this instance. Although continued drug use is not desirable, it may be perceived as leading to less harm to the person and to society (particularly since effective treatments for

drug addiction are available) than the harm caused by people becoming infected and spreading the virus that leads to AIDS (for which there is not likely to be effective vaccines or curative treatments for many years).

2. Concern that because funds are limited for public health and AIDS prevention, the money available should be used only for prevention and treatment efforts. These economic considerations, regarding the costs of using public health money for incentives, is an important concern, and may require cost-benefit analyses. However, the costs of providing health care to AIDS patients, the costs to society of providing care to children orphaned by AIDS in their families, and the loss to society of the potential productivity of people are likely to exceed substantially the costs associated with providing incentives to attend intervention sessions.

3. Concern that other groups do not seem to need incentives and therefore (a) it is unfair to provide them only to some groups or (b) it is demeaning to pay people to receive information or services that can be helpful to them. The belief that some high-risk groups may be more motivated to attend intervention sessions without incentives does not necessarily indicate that it is therefore inappropriate to use incentives for people or groups who may be less motivated. Drug use and poverty, particularly among members of inner city minority communities, may result in distrust of the larger mainstream society, and thus may make it very difficult to obtain adequate levels of participation in programs. Furthermore, AIDS itself calls for a certain level of response. Although efforts to motivate or empower people to seek their own health services can be undertaken, the consequences of HIV infection, in terms of the likelihood of AIDS diagnosis and the possibility of transmission, may indicate that timely prevention efforts are the priority.

Further discussion and research on the advantages and disadvantages of using incentives for AIDS prevention interventions are needed. Research to identify methods of maximizing attendance and to examine alternative enablers or incentives is needed. In addition, research regarding such variables as the characteristics of subjects and the demographic characteristics and activities of project recruiters can be helpful in increasing attendance. These issues are of urgent concern, so that study of the efficacy of alternative interventions can be undertaken with recruitment of the widest variety of persons. This will become even more pressing as successful intervention efforts are found and methods of maximizing the

Table 5. AIDS-related risk behaviors, by percentages, of clients recruited in two time periods with different incentives, Cleveland AIDS prevention project

Behavior	Time 1	Time 2	Significance ¹
	Money orders, cash	Food coupons, gift certificates	
Injected drug use (IDUs only): ²			
Heroin	20	18	NS
Cocaine	27	29	NS
Speedball	14	11	NS
Noninjected drug use: ²			
Alcohol	42	45	NS
Crack	33	34	NS
Cocaine	20	17	NS
Heroin	7	6	NS
Condom use (percent of time used):			
Single sex partner	18	11	NS
Multiple sex partners	26	24	NS

¹ Chi-square tests were used for all significance tests involving categorical data; ² t tests were used for comparisons of means.

² Mean monthly frequency.

Table 6. Attendance at standard and enhanced group sessions by incentive, Cleveland AIDS prevention project

Attendance	Cash		Gift certificates		Significance ¹
	Number	Percent	Number	Percent	
Interviewed	957	...	211
Assigned to enhanced	553	...	135
Number of sessions attended by those assigned to enhanced:					
0 sessions	274	50	87	64	<i>P</i> < .05
1 session	33	6	9	7	...
2 sessions	18	3	2	2	...
3 sessions	41	7	5	4	...
4 sessions	187	34	32	24	...

¹ Chi-square tests were used for all significance tests.

recruitment and maintenance of clients in these interventions will be needed.

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